



Partnering to Reduce Nutrients in Mississippi

MDEQ
April 26, 2012

Nutrient Issues

- **Excess Nutrients (Nitrogen and Phosphorous) cause algae growth which leads to low oxygen levels**
- **Streams and lakes throughout MS are impaired by excess nutrients**
 - TMDLs with nutrient reduction goals
 - Numeric nutrient criteria in development
- **Local benefits to upland and coastal ecosystems from State-wide nutrient reductions to streams and lakes**
- **Cumulative Benefits to Gulf of Mexico**



What Is Being Done About This at the National, Regional, and State Levels?



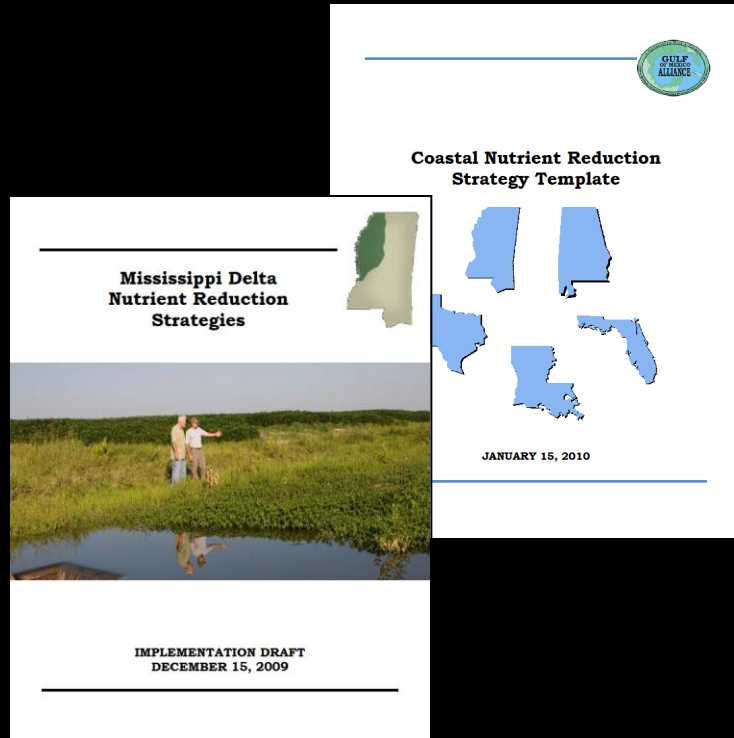
**Mississippi River
Gulf of Mexico
Watershed Nutrient
Task Force**

- **Mississippi River/Gulf of Mexico Watershed Nutrient Task Force**
 - 12 MS River States
 - Co-led by EPA and MS
- **Gulf of Mexico Alliance**
 - 5 Gulf States
 - MS leads Nutrients Team
- **Mississippi Department of Environmental Quality and Our Partners**
 - Nutrient Reduction Strategies



Approach:

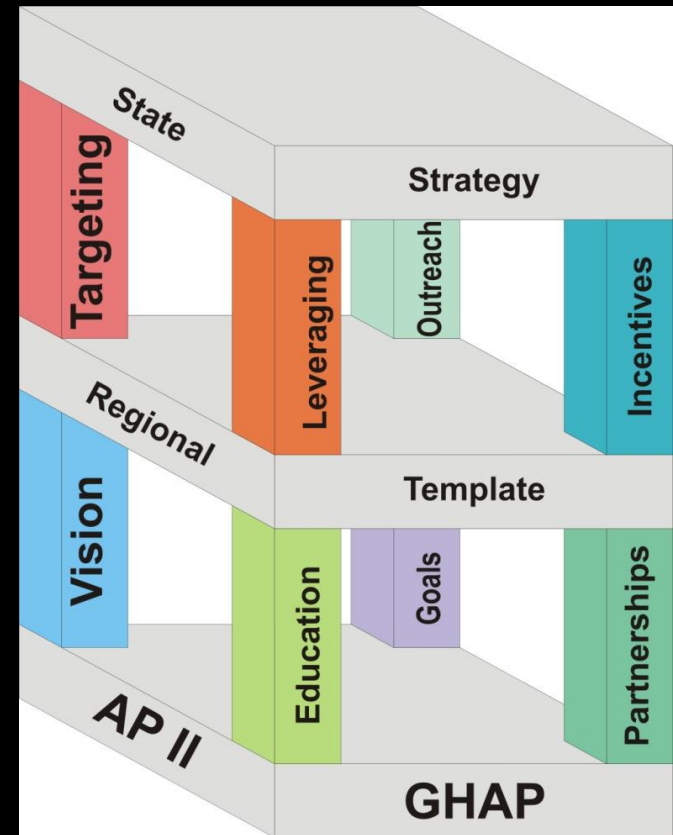
Develop & Implement Strategies



- **Mississippi Delta Nutrient Reduction Strategies (2009)**
 - Co-led with Delta FARM
 - Being implemented with great success due to partnerships
- **GOMA Coastal Nutrient Reduction Strategy Template (2010)**
- **Coastal MS Nutrient Reduction Strategy (2011)**
- **Upland MS Nutrient Reduction Strategy (2011)**

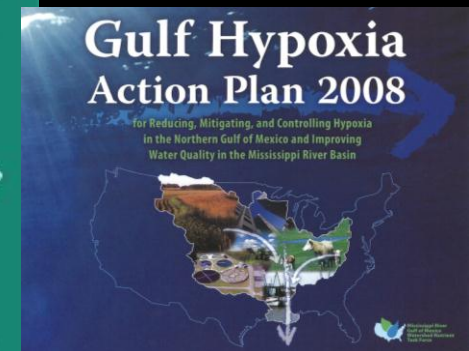
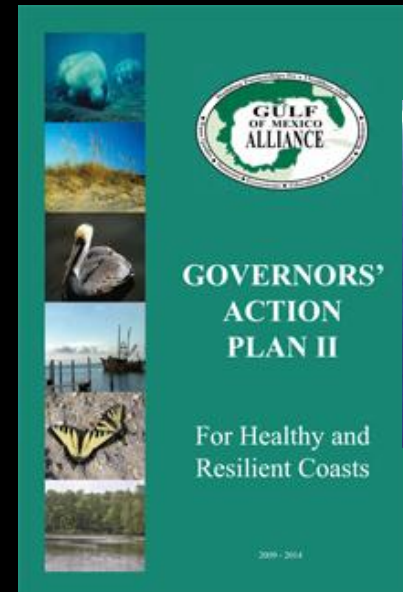
But Why Strategies?

- Consistent, repeatable approaches applicable to all scales
- Facilitates needed research and planning
- Based upon collaboration among stakeholders, state/federal agencies, NGOs, academia
- Guides implementation
- Quantifies load reductions, costs, and value to stakeholders
- Develops approaches and tools to achieve nutrient criteria
- Called for by Hypoxia TF and GOMA Action Plans



Mississippi's Approach

- **Build on the Guiding Principles of the Action Plans**
 - Encourage voluntary, incentive-based, collaborative, cost-effective actions
 - Leverage existing programs & outputs
 - Follow adaptive management
 - Effective education/outreach
 - Target existing funding and seek additional funding
 - Identify opportunities for innovative, market-based solutions
- **Start Now & Do the Best with What We Have**
- **Attain Designated Uses → Cumulative Benefits to Gulf**



Partnerships



YAZOO MISSISSIPPI
DELTA JOINT WATER
MANAGEMENT DISTRICT



Implementation

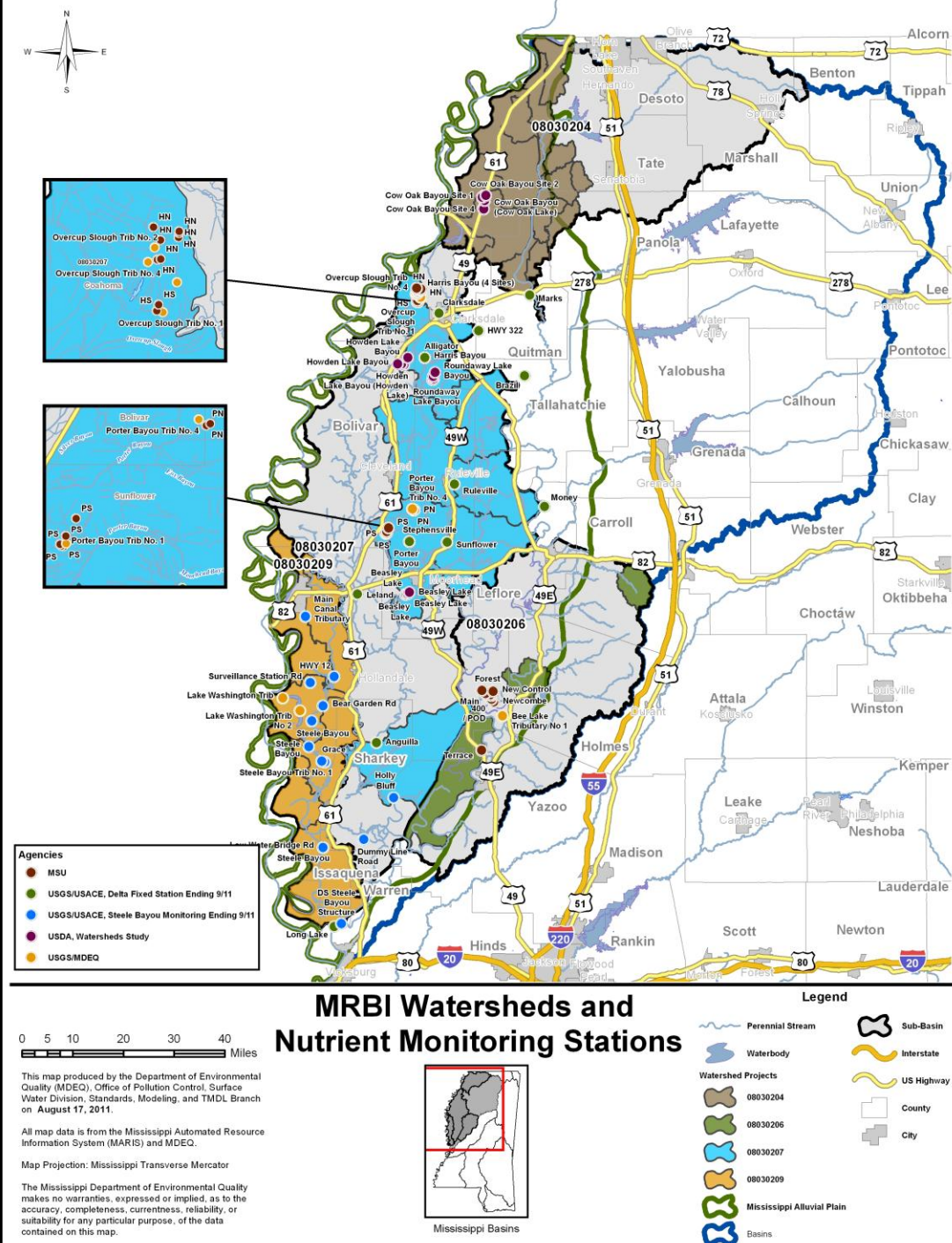
- **Focus on Integration, Collaboration, and Leveraging**
 - Program Integration
 - Technical Assistance
 - Funding
- **Focus on Comparability**
 - Consistency of Approach
 - Nutrient TMDLs
 - Data Comparability
- **Answer Key Questions**



Mississippi Delta Nutrient Reduction Watershed Projects

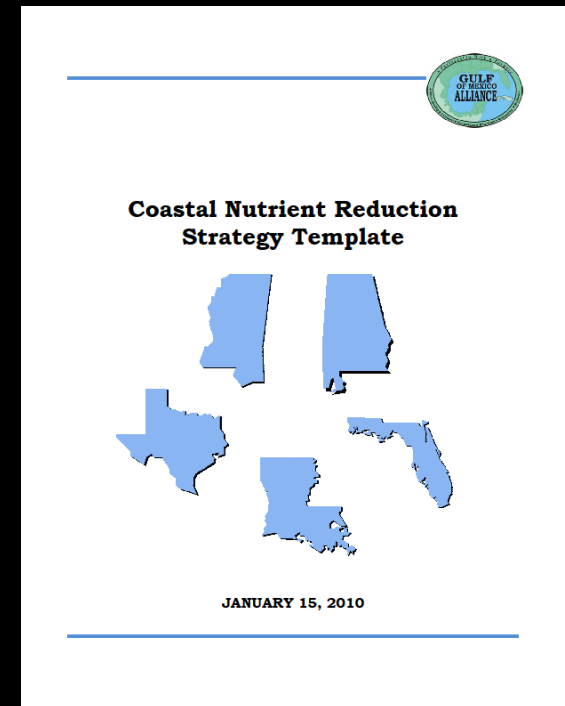
- Focus on Nutrient TMDLs
- Delta
 - 2 New Riverine Watersheds
 - Harris Bayou
 - Porter Bayou
 - Leverage Current Sediment Watershed Projects
 - Bee Lake
 - Lake Washington
 - Wolf/Broad Lake
 - Steele Bayou

Mississippi Delta Nutrient Reduction Watershed Projects



Coastal Watershed Strategies

- **Template for 5 Gulf States**
 - Through Gulf Alliance Nutrient Priority Issue Team
- **Use Template to Develop Individual State Strategies**
 - Leverage MS Delta Work
- **Added Atmospheric Deposition**
- **Implement through Local Watershed Projects**
- **Coastal Watershed Project**
 - Rotten Bayou



Upland Strategies

- Expand Agricultural Emphasis
 - Livestock
 - Forestry
- Expand Focus to Urban Settings
 - Stormwater Management
- Leverage Other Strategies
- Implement through Local Watershed Projects
- Upland Watershed Project
 - Muddy and Tarebreeches Creeks



Watershed Project Outputs

- Tested Common Approach by State/Federal Agencies and Organizations in Mississippi
 - Watershed Characterization and Prioritization
 - Management Practices and Effectiveness
 - Monitoring, QAPP Development
- Information to Estimate Load Reductions, Costs, and Benefits of Future Implementation Efforts
- Improved TMDLs
- Data for Nutrient Criteria Development
- Reduced Nutrient Loadings to Achieve In-basin Designated Uses and Mitigate Gulf Hypoxia

Outcomes

- Collective, collaborative insight, input from stakeholders
- Nutrient reduction strategies leading to implementation
- Champions for nutrient reduction in
- Leveraging opportunities
 - NRCS MRBI and Gulf of Mexico Initiative
 - Collaborating on implementation and





Questions?